International Application No T/US2004/017103

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B01J23/68 B01J37/06 CO7D301/10 B01J21/04 B01J21/12 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) BOIJ CO7D Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. EP 0 496 470 A (SHELL INT RESEARCH) 1 - 15χ 29 July 1992 (1992-07-29) page 2, line 25 - page 5, line 21; claims; examples; tables χ US 5 733 842 A (REMUS DONALD J ET AL) 1 - 1531 March 1998 (1998-03-31) column 2, line 21 - column 5, line 13; claims; examples; tables X EP 1 086 743 A (NIPPON CATALYTIC CHEM IND) 1 - 1528 March 2001 (2001-03-28) page 2, line 36 - page 10, line 35; claims; examples; tables Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. O' document referring to an oral disclosure, use, exhibition or other means document published prior to the international filling date but later than the priority date claimed *&* document member of the same patent family Date of the actual completion of the international search Date of malling of the international search report 3 September 2004 14/09/2004 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3018 de Cauwer, R

International Application No T/US2004/017103

.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	//US2004/01/103
ategory °		Relevant to claim No.
X	EP 1 308 442 A (NIPPON CATALYTIC CHEM IND) 7 May 2003 (2003-05-07) page 3, line 25 - page 6, line 18; claims; examples; tables	1-15
X	EP 0 558 346 A (NIPPON CATALYTIC CHEM IND) 1 September 1993 (1993-09-01) page 3, line 25 - page 7, line 20; claims; examples; tables	1-15
X	EP 0 927 575 A (NIPPON CATALYTIC CHEM IND) 7 July 1999 (1999-07-07) page 3, line 2 - page 4, line 55; claims; examples; tables	1-15
X	US 5 248 557 A (JACOBSON HOWARD W) 28 September 1993 (1993-09-28) column 2, line 21 - column 4, line 11; claims; examples; tables	1–15
X	US 5 801 259 A (KOWALESKI RUTH MARY) 1 September 1998 (1998-09-01) column 2, line 39 - column 24, line 22; claims; tables	1–15
X	US 5 145 824 A (BUFFUM JOHN E ET AL) 8 September 1992 (1992-09-08) column 2, line 15 - column 11, line 39; claims; tables	1-15
X	US 4 428 863 A (FRY WILLIAM E) 31 January 1984 (1984-01-31) column 2, line 63 - column 4, line 31; claims; examples; tables	. 1–15
X	US 4 272 443 A (TITZENTHALER ECKART ET AL) 9 June 1981 (1981-06-09) column 1, line 58 - column 3, line 6; claims; examples; tables	1-15
X	EP 0 480 539 A (UNION CARBIDE CHEM PLASTIC) 15 April 1992 (1992-04-15) page 2, line 11 - page 14, line 53; claims; examples; tables	1-15
X	US 5 102 848 A (SOO HWAILI ET AL) 7 April 1992 (1992-04-07) column 3, line 53 - column 16, line 35; claims; examples; tables	1-15
X	US 4 769 358 A (KIRIKI MASAHARU ET AL) 6 September 1988 (1988-09-06) column 5, line 39 - column 13, line 15; claims; examples; tables	1-15

Information on patent family members

International Application No

						21, 332	004/017103
	tent document in search report		Publication date		Patent family member(s)		Publication date
ΕP	0496470	Α	29-07-1992	AU	641584	B2	23-09-1993
				ΑU	1034192	Α	30-07-1992
				BR	9200166		06-10-1992
				CA	2059711		23-07-1992
				CN	1063427		12-08-1992
				CS	9200166		12-08-1992
				DE	69200450		03-11-1994
				DE	69200450		23-02-1995
				DK			24-10-1994
				EP	0496470		29-07-1992
				ES	2061309		01-12-1994
				JP	3302387		15-07-2002
				JP	5084440		06-04-1993
				KR	225874	B1	15-10-1999
				MX	9200243	A1	01-07-1992
				PL	293237	A1	02-11-1992
				SK	279174		08-07-1998
				RÜ	2014114		15-06-1994
				TR	25623		01-07-1993
				US	5145824		08-09-1992
				ZA	9200376		30-09-1992
					9200370		30-09-1992
US	5733842	Α	31-03-1998	ΑT	206636	T	15-10-2001
	07000-1E	,,	01 00 .1330	BR	9708889		03-08-1999
				CA	2249277		06-11-1997
				CN			
					1216939	A ,D	19-05-1999
				DE	69707278		15-11-2001
			•	DE	69707278		18-07-2002
				DK	900126		11-02-2002
				EP	0900126		10-03-1999
				ES	2165601	T3	16-03-2002
				JP	3295433	B2	24-06-2002
				JΡ	11509777	Ţ	31-08-1999
				RU	2157729	C2	20-1.0-2000
				TW	482693		11-04-2002
				WO	9740932		06-11-1997
EP	1086743	Α	28-03-2001	EP	1086743		28-03-2001
				JP	2001157839		12-06 - 2001
				บร	2003013600		16-01-2003
				US	6600056	B1	29-07-2003
	1308442	A	07-05-2003	JP	2003144932	Λ	20-05-2003
Εľ	1300442	н	07-05-2003	EP			
					1308442		07-05-2003
				US 	2003092922		15-05-2003
		Α	01-09-1993	JP	3313164	B2	12-08-2002
ΕP	0558346	/ •			5329368		14-12-1993
EP	0558346	^		UP	2222300		
EP	0558346	,		JP AU			
EP	0558346	^		ΑU	659914	B2	01-06-1995
EP	0558346	^		AU AU	659914 3312593	B2 A	01-06-1995 02-09-1993
EP	0558346	^		AU AU BR	659914 3312593 9300692	B2 A A	01-06-1995 02-09-1993 31-08-1993
EP	0558346	^		AU AU BR CA	659914 3312593 9300692 2089510	B2 A A A1	01-06-1995 02-09-1993 31-08-1993 28-08-1993
EP	0558346	^		AU AU BR CA CN	659914 3312593 9300692 2089510 1080211	B2 A A A1 A ,B	01-06-1995 02-09-1993 31-08-1993 28-08-1993 05-01-1994
EP	0558346			AU AU BR CA CN DE	659914 3312593 9300692 2089510 1080211 69300497	B2 A A A1 A ,B	01-06-1995 02-09-1993 31-08-1993 28-08-1993 05-01-1994 26-10-1995
EP	0558346			AU BR CA CN DE DE	659914 3312593 9300692 2089510 1080211 69300497	B2 A A A1 A ,B D1 T2	01-06-1995 02-09-1993 31-08-1993 28-08-1993 05-01-1994 26-10-1995 04-04-1996
EP	0558346			AU BR CA CN DE DE EP	659914 3312593 9300692 2089510 1080211 69300497 69300497 0558346	B2 A A A1 A ,B D1 T2 A1	01-06-1995 02-09-1993 31-08-1993 28-08-1993 05-01-1994 26-10-1995 04-04-1996 01-09-1993
EP	0558346			AU BR CA CN DE DE	659914 3312593 9300692 2089510 1080211 69300497	B2 A A A1 A ,B D1 T2 A1 B1	01-06-1995 02-09-1993 31-08-1993 28-08-1993 05-01-1994 26-10-1995 04-04-1996

information on patent family members

International Application No T/US2004/017103

	atent document I in search report		Publication date		Patent family member(s)		Publication date
ΕP	0558346	Α		US	5395812	A	07-03-199
EP	0927575	Α	07-07-1999	AT	236721	T	15-04-2003
		•••		BR	9807867		15-08-2000
				CA	2257039		25-06-1999
				CN	1223900		
							28-07-1999
				DE		D1	15-05-2003
				DE	69813170		18-12-2003
				EP	0927575	A1	07-07-1999
				ID	21608		01-07-1999
				JΡ	11244699		14-09-1999
				SG	76583		
							21-11-2000
				TW	426545		21-03-2001
				US	6153556		28-11-2000
				US	6281370	B1 	28-08-2001
US	5248557	Α	28-09-1993	EP	0527958	A1	24-02-1993
				JP	5507263		21-10-1993
				MO	9118841		12-12-1991
115	5801259	A	01-09-1998	AU	711973	 R2	28-10-1999
55	JJ012J9	Λ	01 03 1330				
				AU	2776097		19-11-1997
				CA	2252780		06-11-1997
				CN	1216940		19-05-1999
				DE	69705309	D1	26-07-2001
				DE	69705309		15-11-200
				MO	9740933		06-11-1997
				EP	0900128		10-03-1999
				ES	2158559		01-09-2001
				JP	2000508969	T 	18-07-2000
US	5145824	Α	08-09-1992	AU	641584		23-09-1993
				AU	1034192		30-07-1992
				BR	9200166		06-10-1992
				CA	2059711		23-07-1992
				CN			
					1063427		12-08-1992
				CS	9200166		12-08-1992
				DE	69200450		03-11-1994
			•	DE	69200450	T2	23-02-1995
				DK	496470	T3	24-10-1994
				EP	0496470	A 1	29-07-1992
				ËS	2061309		01-12-1994
				JP			
					3302387		15-07-2002
				JP	5084440		06-04-1993
				KR	225874		15-10-1999
				MX	9200243	A 1	01-07-1992
				PL	293237		02-11-1992
				SK	279174		08-07-1998
				RU	2014114		15-06-1994
				TR	25623		01-07-1993
				ZA	9200376	A 	30-09-1992
US_	4428863	Α	31-01-1984	NONE			
US	4272443	A	09-06-1981	DE	2844402	A1	30-04-1980
				CA	1125267	A1	08-06-1982

Information on patent family members

International Application No T/US2004/017103

Patent documer cited in search rep		Publication date		Patent family member(s)		Publication date
EP 0480539	Α		AU	8576091 A	-	30-04-1992
İ			CA	2053358 A		13-04-1992
1			EP	0480539 A		15-04-1992 ·
			JP	4330938 A	\	18-11-1992
US 5102848	A	07-04-1992	NONE			
US 4769358	A	06-09-1988	 JP	2068041 C	;	10-07-1996
			JP	5025547 B	3	13-04-1993
			JP	62114653 A	4	26-05-1987
			JP	2056806 C)	23-05-1996
			JP	5025548 B	3	13-04-1993
			JP	62114654 A	1	26-05-1987
Ì			AU	586048 B	32	29-06-1989
			AU	6490286 A	1	14-05-1987
1			CA	1277651 C	;	11-12-1990
I			CN	86108406 A	A,B	01-07-1987
			DE	3663336 D		22-06-1989
			EP	0229465 A	\1	22-07-1987
			KR	9104072 B	31	22-06-1991